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Shaping Input Tax Incentives for Companies Spending on R&D under the 2016 CCTB Directive Proposal

In this article, the author examines R&D incentives under the 2016 CCTB Directive Proposal.

1. Towards a Common Consolidated Corporate Tax Base

In March 2011, the European Commission launched a proposal for a common consolidated corporate tax base (CCCTB).[1] The CCCTB proposal envisaged an optional system for companies to apply a common set of rules to compute taxable profits, including the ability to form a consolidated group, wherever based in the European Union. Its main objective was to create a corporate tax system that treats the European Union as a Single Market for the purpose of computing the corporate tax base of companies, which would facilitate cross-border activity for companies resident in the European Union and promote the objective of making it a more competitive location for investment internationally. For this reason, the 2011 proposal for a CCCTB focused on the objective of facilitating the expansion of commercial activity for businesses within the European Union.

Due to a lack of progress on the 2011 proposal in the Council, the Commission relaunched the CCCTB proposal in October 2016.[2] The relaunch of the CCCTB proposal lies at the heart of the Communication "A Fair and Efficient Corporate Tax System in the European Union: 5 Key Areas for Action"[3] and the Commission's Action Plan for a Fair and Efficient Corporate Tax System in the EU.[4]

On 25 October 2016, the CCCTB was published[5] and presented as an overarching initiative that could be an extremely effective tool for meeting the objectives of fairer and more efficient taxation. Furthermore, the relaunched proposal for a CCCTB includes rules to address some of the key Actions of the OECD Base Erosion and Profit Shifting (BEPS) Project.

To overcome the difficulties faced in obtaining approval for the 2011 proposal, the Commission advocated a two-step process. For this reason, the relaunched proposal consists of two separate draft directives to be implemented sequentially: one for a common corporate tax base (2016 Proposed CCTB Directive)[6] and the other for the CCCTB, which provides for consolidation as well.[7]

The CCCTB package pursues, as a general objective, the determination of a single set of provisions for the calculation of the corporate tax base,[8] including common rules regarding depreciation, deductible costs and incentives (among others, R&D tax incentives) as a replacement for the 28 different national regimes.

The intention is for the 2016 Proposed CCTB Directive to act as a step toward re-establishing the link between taxation and the place where profits are earned via an apportionment formula comprising three factors: 1/3 for the value of tangible assets, 1/3 for labour (payroll and number of employees are equally weighted under this factor) and 1/3 for the value of sales by destination. In this way, the CCTB is intended to reflect a balanced approach to distributing taxable profits amongst eligible Member States. Since the proposal only concerns the corporate tax base and is not intended to harmonize national corporate tax rates, each country could then apply its own rate to the apportioned base. If approved by all EU Member States, the CCTB proposal would apply from 2019.

The CCCTB proposal lays down the conditions for the formation of a consolidated tax group and sets out the mechanism for allocating the consolidated tax base to the respective Member States (formulary apportionment). It also provides rules for entering and leaving a

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This article was developed within the framework of a research project financed by the Spanish Ministry of Economy, Industry and Competitiveness (Ref. DER2015-68072-P, MINECO/FEDER). The underlying research was also funded by an "aid to excellence research" of the regional government of Comunidad Valenciana (PROMETEO/2016/053).

1. European Commission, Proposal for a Council Directive on a Common Consolidated Corporate Tax Base (CCCTB), COM(2011) 121 (16 Mar. 2011), EU Law IBFD [2011 Proposed CCCTB Directive].
2. Proposal for a Council Directive on a Common Consolidated Corporate Tax Base (CCCTB), COM(2016) 683 final (25 Oct. 2016), EU Law IBFD [2016 Proposed CCCTB Directive].
3. Commission Communication, A Fair and Efficient Corporate Tax System in the European Union: 5 Key Areas for Action, COM(2015) 302 final (17 June 2015), EU Law IBFD.
4. On 17 June 2015, the European Commission published its Action Plan for a fair and efficient corporate taxation in the European Union. This Action Plan sets out a series of initiatives to tackle tax avoidance, secure sustainable revenue and strengthen the Single Market for businesses. The Action Plan identified 5 key areas for action. It reviews existing corporate tax policies in the European Union and aims to establish a system of corporate taxation in the European Union whereby business profits are taxed in the jurisdiction where value is actually created.
5. The 2011 Proposed CCTB Directive, *supra* n. 1, was withdrawn on the same day.
6. Proposal for a Council Directive on a Common Corporate Tax Base (CCTB), COM(2016) 685 final (25 Oct. 2016), EU Law IBFD [2016 Proposed CCTB Directive].
7. 2016 Proposed CCCTB Directive, *supra* n. 2.
8. The tax base is to be calculated as revenue less exempt revenue, deductible expenses and other deductible items.

group, including the treatment of losses.[9] There are also anti-avoidance provisions to prevent abuses of the consolidation and apportionment systems, for example, involving business reorganizations and an intra-group transfer of assets. Special provisions would adapt the CCTB rules to groups that become subject to the CCCTB rules, so that, for example, the interest limitation rules would be applied by reference to the CCCTB group. If approved by all EU Member States, the CCCTB proposal would apply from 2021.

These 2016 proposals focus not only on helping business, but also on countering tax avoidance.[10] Consequently, they contain provisions intended to mirror the measures that were included in the ATAD Directive (2016/1164) (ATAD),[11] which was adopted in July 2016.

Unlike the 2011 proposal, which was conceived as an optional scheme for EU businesses, the new rules (both CCTB and CCCTB) would be mandatory for large corporate groups (i.e. those with consolidated revenue exceeding EUR 750 million). Meanwhile, the system would be optional for other companies. Another difference between the 2011 proposal and the relaunched proposal is that, under the later proposal, administrative provisions are limited to notification procedures. Taxpayers thus would continue to be bound by their national administrative provisions.

2. Encouraging R&D under the 2016 Proposed CCTB Directive

According to the OECD, Research and Development (R&D) is key to productivity and growth.[12] Moreover, the core of the Europe 2020 strategy is R&D, the objective being to realize overall R&D spending of 3% of gross domestic product (GDP).[13]

With regard to benefits, many studies show a correlation between R&D tax incentives and an increase in private research spending within individual countries. Although it is difficult to relate increased R&D intensity directly to tax measures, it appears that, on average, tax incentives can increase private research spending by an amount equal to the loss in tax revenue. The decision to support private R&D through direct financing and/or tax incentives is to be made by governments within the context of their political and economic systems.[14]

The Commission is not only aware that deductions should be provided for R&D costs in order to support innovation in the economy and modernize the internal market,[15] but also that implementation of tax incentives to encourage R&D is based on a tax policy decision.

Under the relaunched proposal – as well as under the 2011 proposal – the general rule is that income realized is, in principle, taxable unless specifically exempted or reduced by deductible expenses and other deductible items. Consequently, the Commission, in order to foster R&D activities through tax measures, has expressly envisaged, under the 2016 Proposed CCTB Directive (similar to the original 2011 proposal),[16] a general deduction for R&D costs.

Pursuant to article 9(1) of the 2016 Proposed CCTB Directive,[17] "[e]xpenses shall be deductible only to the extent that they are incurred in the direct business interest of the taxpayer". This means that, as a general rule, all expenses (including R&D expenses) are fully deductible (100%) in the year incurred – with the exception of immovable property – if they are incurred by the taxpayer for the purpose of the business with a view to obtaining or securing income.

Although the tax base is broadly designed, the Commission is of the opinion that:[18]

> taxable revenues should be reduced by business expenses and certain other items. Deductible business expenses should normally include all costs relating to sales and expenses linked to the production, maintenance and securing of income. To support innovation in the economy and modernise the internal market, deductions should be provided for research and development costs.

In addition to R&D costs incurred for the purposes of the business, according to article 9(3) of the relaunched proposal, taxpayers would be entitled to a yearly "super-deduction", on R&D expenditure of up to EUR 20 million, of 50% (i.e. a total deduction of 150%). To the extent that R&D expenditure exceeds EUR 20 million, taxpayers may deduct 25% of the excess amount (i.e. a super-deduction of 150% on expenditure up to EUR 20 million + a deduction of 125% of the excess).

In computing the super-deduction cost base, costs related to movable tangible fixed assets are excluded. Presumably, this means that expenditures for machinery and equipment are not eligible for the super-deduction. Therefore, this super-deduction includes current expenditures (i.e. wages and salaries of research personnel and the cost of materials) but excludes capital expenditures (i.e. the cost of equipment and facilities).[19]

Moreover, considering that one of the key policy initiatives relating to the functioning of the single market is to support small and innovative entrepreneurship, article 9(3) of the relaunched proposal will grant an "enhanced super-deduction" for small start-ups that are particu-

9. Mainly contained in the 2016 Proposed CCTB Directive, *supra* n. 6.
10. Explanatory Memorandum to the 2016 Proposed CCTB Directive, *supra* n. 6, at pp. 3-4, available at https://ec.europa.eu/taxation_customs/sites/taxation/files/com_2016_685_en.pdf.
11. Council Directive 2016/1164 of 12 July 2016 laying down rules against tax avoidance practices that directly affect the functioning of the internal market, OJ L 193/1 (2016), EU Law IBFD.
12. OECD, *Supporting Investment in Knowledge Capital, Growth and Innovation* (OECD 2013).
13. European Commission, Europe 2020 – A strategy for smart, sustainable and inclusive growth, COM(2010) 2020 (3 Mar. 2010).
14. OECD, *Tax Incentives for Research and Development: Trends and Issues* p. 24 (OECD 2002), available at http://www.oecd.org/science/inno/2498389.pdf.
15. 2016 Proposed CCTB Directive, *supra* n. 6, at p. 8.
16. 2011 Proposed CCCTB Directive, *supra* n. 1.
17. Id.
18. 2016 Proposed CCTB Directive, *supra* n. 6, at p. 8.
19. With regard to deductible R&D expenses, a distinction is usually drawn between current expenditure (wages, salaries of R&D staff, cost of materials, etc.) and capital expenditure (cost of equipment and facilities used for R&D purposes).

larly innovative. In this context, the deduction ceiling is increased and taxpayers may deduct an extra 100% of their R&D costs (i.e. 200%) insofar as these do not exceed EUR 20 million and provided the enterprise:

- is not listed and has fewer than 50 employees and an annual turnover and/or annual balance sheet total that does not exceed EUR 10 million;
- has not been registered for longer than 5 years. If the taxpayer is not subject to registration, the period of 5 years may be deemed to start at the moment that the enterprise either starts or is liable for tax on its economic activity;
- was not formed through a merger; and
- does not have any associated enterprises.

Regarding the "super-deduction" and the "enhanced super-deduction" it must be said that the 2016 proposal is more generous[20] than the previous 2011 proposal on this point, since this super-deduction allows for a deduction of more than 100% of the effective R&D costs, thus more than the actual R&D expenditure incurred by the taxpayer. In other words, it is a disproportionate tax advantage relative to the R&D costs and investment effort. In this sense, it can be said that super-deductions or enhanced deductions work similarly to a tax credit or a reduced income tax rate based on R&D expenditure.[21]

3. Justification for the Need for Harmonization in the Field of R&D Tax Credits in the European Union

It is a fact that, currently, R&D tax credits take a multiplicity of forms and vary significantly across EU Member States. There are Member States where R&D tax credits do not even exist (like Germany) and other countries where tax credits have been in place for a long time (for instance, France).[22] A matter of special concern is the eligibility conditions for an R&D tax credit, which vary widely. As such, R&D tax credit bases vary along multiple lines. For example, tax credits can be incremental[23] (like in Italy) or volume based[24] (like in Belgium, France, the Netherlands and the United Kingdom); the tax base can also vary with firm size (for instance, in France the current version of the R&D tax credit does not formally distinguish between small and medium-sized enterprises (SMEs) and large firms, while in Italy (2000-2014),[25] the United Kingdom[26] and the Netherlands[27] a distinction is drawn between SMEs and large companies). Sometimes, the amount of the tax credit varies depending on the investment in R&D (for example, in France,[28] but not in the Netherlands and the United Kingdom). There may be a ceiling on the R&D tax credit (for example, in the Netherlands, where a ceiling of EUR 14 million applies on R&D wages; Italy, where a ceiling of EUR 50 million applies on all eligible R&D; and France, where there was a ceiling on the tax credit that was abolished in 2008. In contrast, there is no ceiling in Belgium and the United Kingdom). R&D tax credit regimes may also be industry-specific, targeting certain industries and excluding others[29] (like in France where, prior to 1992, agricultural and textile firms could not benefit from the French R&D tax credit, or the United Kingdom, where, since 2008, pharmaceutical firms doing vaccine research enjoy a specific regime that allows them to deduct about 40% to 50% of their R&D personnel expenses from their taxable profit).[30]

In this context, the 2016 CCTB Directive Proposal has reignited the debate on harmonization in the field of direct taxes, extending this debate to R&D tax credits. The rationale for tax harmonization at the EU level is that, in the absence of harmonization, tax competition among Member States prevails. While tax competition may have a positive effect on government efficiency, it may distort public and private choices. In the field of R&D tax credits, tax competition could result in uneven increases in R&D investment across the European Union, with R&D expenditures rising in some Member States and stagnating in others, which could be contrary to the Europe 2020 objective. For this reason, some degree of tax harmonization in terms of R&D tax credits may make sense.[31]

Tax credits are essentially negative corporate taxes, however, and corporate taxes are included in the direct taxation field, which is a prerogative of Member States. For this reason, it is necessary to ascertain if the 2016 CCTB

20. Regarding the super-deduction, however, there is no lack of voices that indicate that the proposal is far less favourable for innovative multinationals than the rules currently in place in a number of Member States, as well as in countries outside the European Union. *See* VNO-NCW, Position Paper on the proposals from the European Commission regarding the Common Consolidated Corporate Tax Base (CCCTB), Crucial disadvantages of the proposals for a European tax on profits (26 Nov. 2016), available at: https://www.vno-ncw.nl/brieven-en-commentaren/position-paper-proposals-european-commission-regarding-common-consolidated.
21. K. Künnapas, *Estonia Branch Report*, in *Tax Incentives on Research and Development (R&D)* p. 281 (IFA Cahiers vol. 100a, 2015), Online Books IBFD.
22. L. Jacquet & S. Robin, *Harmonization of R&D TAX Credits across the European Union: Nonsense or common sense*, THEMA Working Paper No. 2017-05, Université de Cergy-Pontoise, p. 3 (Feb. 2017).
23. Based on the yearly variation in R&D expenditure.
24. Based on the yearly volume of R&D expenditure.
25. The rate of the R&D tax credit in Italy in 2000-2014 was 20% to 30% for SMEs (depending on the region), versus 15% to 25% for medium-sized firms and 10% to 20% for large ones; *see* Jacquet & Robin, *supra* n. 22, at p. 7
26. In the United Kingdom, the R&D tax credit introduced in 2000 was originally only available to SMEs, and a different regime for larger companies was introduced in parallel in 2002. The former could deduct 50% of their R&D personnel expenses from their taxable profit, whereas the latter could deduct 25% of their R&D personnel expenses. In 2008, these amounts were as high as 75% of R&D personnel expenses for SMEs and 30% for large firms; *see* Jacquet & Robin, *supra* n. 22, at p. 7.
27. In the Netherlands, the amount of the 1998 tax credit was 40% of "knowledge worker" wages in SMEs versus 17% in large firms. In 2004, it was increased to 42% for SMEs and reduced to 14% for large firms; *see* Jacquet & Robin, *supra* n. 22, at pp. 7-8.
28. The tax credit is equal to 30% for investments of less than EUR 100 million and 4% for investments above this threshold; *see* Jacquet & Robin, *supra* n. 22, at pp. 7-8.
29. However, it must be taken into consideration that Member States are not totally free to design R&D measures, since they are limited by the EU State aid regime; *see* B. Pérez Bernabeu, *R&D&I Tax Incentives in the European Union and State Aid Rules*, 54 Eur. Taxn. 5, pp. 178-191 (2014), Journals IBFD and R. Luja, *EU Report*, in *Tax Incentives on Research and Development (R&D)* pp. 57-77 (IFA Cahiers vol. 100a, 2015), Online Books IBFD.
30. Jacquet & Robin, *supra* n. 22, at pp. 7-9.
31. Id., at p. 4.

Directive Proposal regarding R&D tax credits passes the subsidiarity and proportionality tests, since there should only be action at the EU level where action by individual Member States cannot provide an effective solution, inasmuch as many tax problems simply require better coordination of national policies.

The R&D tax credit provided by the relaunched proposal – in particular, the super-deduction – passes the core of the subsidiarity test, but may fail the proportionality test.[32] According to the proportionality principle, when EU action is required under the subsidiarity test, it should be minimal,[33] i.e. the proportionality test entails that R&D tax incentives should not lead to a deviation from tax neutrality that goes beyond what is necessary to achieve the intended purpose.[34] Despite this requirement of proportionality, the super deduction provided by the 2016 CCTB Directive Proposal is too ambitious to be considered minimal intervention. Its extent goes further than a minimal level of harmonization aimed at avoiding an uneven expansion of the R&D effort across EU Member States since it embodies a tax advantage that goes beyond the real R&D expenditure incurred by the taxpayer (as it allows for a deduction higher than 100% of the effective R&D costs).

In order to be more respectful of the principle of proportionality, it would be more desirable for the relaunched proposal to provide a measure focussed mainly on harmonization of the R&D tax credit base, fixing a minimal tax credit rate that allows for complementary R&D tax incentives at the national level. In this respect, it is arguable that, perhaps, the problems regarding R&D tax incentives may be resolved – at least at this early stage when Member States are not hiding their reluctance to adopt a compulsory consolidated common base – not by harmonizing, but simply by coordinating the different R&D tax policies across the European Union. Harmonization could be postponed until a later stage of tax consolidation in the European Union.

4. R&D Tax Credits Provided by Article 9 of the CCTB Proposal: A Critical Overview

As stated in section 2., according to the 2016 CCTB Directive Proposal, all costs relating to R&D are considered a tax deductible expense. However, this statement requires further comment.

First, it should be noted that a cause and effect relationship between revenue and tax deductible R&D expenses is of particular relevance. According to the 2016 CCTB Directive Proposal, R&D costs are only deductible if they are incurred by the taxpayer for the purpose of the business, with a view to obtaining or securing income.[35] This linking requirement is known as the "economic purpose test", but due to the ambiguous and imprecise wording of article 9(1) the door is open to a wide variety of income-related expenses, since the definition of "business activity" has a broad scope, allowing for a wide spectrum of expenses to be deducted from the tax base. For obvious legal certainty reasons, this wide array of deductible expenses needs to be counterbalanced by a list of non-deductible expenses[36] in order to determine which expenses are tax deductible.

Second, it should be emphasized that although the Commission has declared that the allowance for R&D expenses is designed to at least maintain existing R&D tax incentives,[37] the truth is that this proposal is not groundbreaking. Such incentives are already available, in some form, in a large number of EU Member States and, therefore, the proposal does not confer an additional tax advantage on taxpayers undertaking R&D activities. This because deductible expenses associated with conducting business activities normally include all costs involved in sales, as well as generating and securing income, which includes R&D expenses. It can, therefore, be concluded that R&D expenses receive, under the 2016 CCTB Directive Proposal, the same tax treatment as any other deductible expense, which means that this approach will not act as an effective incentive for companies opting into the system to continue to invest in R&D.

Therefore, the intention behind the Commission's 2016 CCTB Directive Proposal is probably harmonization.[38] Good evidence of this can be found in the fact that the super-deduction allows for a deduction of 150% of the R&D expenditure up to EUR 20 million, but this deduction is reduced to 125% on the excess amount. It seems obvious that if the Commission had intended to promote an increase in private R&D expenditure, the percentage applicable to the excess amount would have been higher than 150% on expenditure up to EUR 20 million.

From this point of view, harmonized rules on R&D tax incentives represent a renewed push to create an overarching corporate tax regime in Europe, with the aim of clamping down on aggressive tax planning by multinationals. The chosen means of achieving this leave practically no room for tax competition since article 9 is designed such that companies will be able to benefit from the same deduction regardless of which Member State they operate in. Such uniform implementation faces, however, two main obstacles.

32. Id., at p. 5.
33. Moreover, proportionality also applies to the State aid field, thus prima facie selective tax measures may only be justified by the nature of the tax system if the technical derogation is proportionate. Moreover, selective R&D tax incentives that may be approved under art. 107(3) of the TFEU must meet a proportionality test. Broadly speaking, under EU law, a measure is regarded as proportionate where (i) it has a legitimate aim, (ii) it is suitable, (iii) it is necessary to achieve the aim and (iv) the measure remains reasonable; *see* R. Danon, *General Report*, in *Tax Incentives on Research and Development (R&D)* p. 26 (IFA Cahiers vol. 100a, 2015), Online Books IBFD.
34. Id., at p. 26.
35. Moreover, the definition of qualifying R&D expenditure is also relevant for the purposes of the modified nexus approach applicable to patent boxes; id., at p. 31.
36. Provided by art. 12 of the 2016 Proposed CCTB Directive, *supra* n. 6.
37. Explanatory Memorandum to the 2016 Proposed CCTB Directive, *supra* n. 6, at p. 7.
38. E. Gil García, *The Effect of Anti-Avoidance Provisions Regarding the Promotion of Innovation: Considerations from a Tax Policy Perspective*, 70 Bull. Intl. Taxn. 10, p. 592 (2016), Journals IBFD.

First, it is remarkable that, under the 2016 proposal, only costs related to immovable property are excluded from the super deduction tax credit base. It is thus assumed that all other R&D expenses are included, but this is not legally certain, as the proposal does not provide a definition of R&D activity, which is a key element in designing R&D input tax incentives, in particular the R&D tax credit base.

Due to the lack of an R&D activity definition in the relaunched proposal, the definition of what should be considered R&D activity for tax purposes needs to be resolved at the national level. It is true that most Member States have relied on the Frascati and Oslo manuals,[39] however, some countries have adopted a slightly different or broader definition of R&D depending, in particular, on policy considerations, for instance, the level of novelty varies from jurisdiction to jurisdiction. In some jurisdictions, the novelty must be new to the world (for example, in the United Kingdom) or in that market (for instance, in France) while in other jurisdictions, a novelty at the level of the firm is sufficient (for instance, in the Netherlands).[40]

In addition, input incentives may target different R&D expenditure subcategories, hampering the establishment of a uniform R&D tax credit base across the European Union. It is precisely the different typologies of R&D expenditures that entitle a firm to a tax credit that vary the most among the EU Member States, which hampers harmonization.[41] Such expenditure can relate to R&D costs in the strict sense – for instance machinery, equipment or buildings – such as in Belgium where only costs regarding machinery and equipment are included, whereas other countries like Austria and the Netherlands extend the incentive to cover overhead costs. Some countries restrict the qualifying expenditure to R&D costs that are incurred domestically, although such a condition is often more flexible among Member States due to imperatives attached to the EU fundamental freedoms. For example, Spain allows an R&D tax credit if the R&D activities were developed in Spain, another Member State or EEA state.[42]

Some schemes also consider R&D wages to be eligible costs, including, inter alia, payroll withholding taxes. This is so in Belgium, where an 80% exemption applies in respect of professional withholding taxes on wages paid to specific personnel with a PhD or a master's degree in the scientific or engineering domain employed as part of an R&D programme (*exoneration du précompte professionel*). Also, in the Netherlands, a 35% wage tax reduction is granted to employers in respect of salaries paid to employees undertaking certain R&D activities that must be systematically organized in the country.[43]

Moreover, input incentives can be related to IP expenditure, such as costs and expenses incurred in acquiring patents, investment in intangible assets or the purchase of new technologies. This is so in Cyprus and the Czech Republic, where both IP costs and IP income are covered by R&D incentives.[44]

This situation may result in uneven implementation of the proposal due to mismatches in the definition of R&D activity and in the determination of the R&D tax credit base among Member States, which may interfere in allocation decisions adopted by companies. Companies operating in the European Union may choose to settle in the territory of the Member State with the broadest legal definition in order to obtain a higher R&D cost deduction. Asymmetries (qualification problems) may also be generated in an EU cross-border context, for example, when a taxpayer resident in one Member State performs R&D activities in another Member State. In this situation, it may happen that the concrete category of R&D expense relevant to the activity is considered deductible in the Member State where the R&D activity is carried out but is not considered deductible in the Member State where the taxpayer is resident. In this situation, a controversial issue arises when the taxpayer makes a claims for the R&D input tax incentive in the Member State where the company is resident because the state of residence will not recognize the deductibility of the expense in the other Member State, which does recognize the deductibility of that expense. For this reason, a common definition of R&D activity for tax purposes is desirable, as well as a correlative common definition of the R&D tax credit base applicable to all Member States with the goal of ensuring consistent implementation of the proposal.

In close connection with the lack of an R&D definition, it should be noted that, based on a careful reading of article 9, it is clear that the proposal ignores the allocation of the investment in qualifying the R&D expense as deductible. This means that it is irrelevant whether or not the expense is incurred in a Member State in determining whether the deduction should be allowed. This wording may increase the appeal, for EU tax resident companies, of making investments in R&D outside the European Union, where the wages and salaries of research personnel and the costs of materials, equipment or facilities are lower.

Given this conclusion, the question that arises is whether or not R&D expenditure incurred abroad, but financed by EU companies, is counted towards the calculation of 3% of the European Union's GDP, which is the target fixed by the Commission for investment in R&D in the European Union by 2020.

39. The Frascati Manual (Frascati Manual: Proposed Standard Practice for Surveys on Research and Experimental Development) was originally written by and for the experts in OECD member countries who collect and issue national data on research and development (R&D). Over the years, it has become the standard of conduct for R&D surveys and data collection not only in the OECD and the European Union, but also in several non-member economies, for example, through the science and technology surveys of the UNESCO Institute for Statistics (UIS) and is available at http://www.oecd.org/sti/inno/frascatimanualproposedstandardpracticeforsurveysonresearchandexperimentaldevelopment6thedition.htm. The Oslo Manual (Oslo Manual: Guidelines for Collecting and Interpreting Innovation Data) is the foremost international source of guidelines for the collection and use of data on innovation activities in industry and is available at http://www.oecd.org/sti/inno/oslo-manual-guidelines-for-collecting-and-interpreting-innovation-data.htm.
40. Danon, *supra* n. 33, at p. 30.
41. Jacquet & Robin, *supra* n. 22, at pp. 7-8.
42. Gil García, *supra* n. 38, at p. 593.
43. Id.
44. Id.

In answering this question, it should be noted that statistics[45] on R&D expenditure are collected by Eurostat, which compiles data on R&D expenditure using the guidelines in the Frascati manual, published in 2002 by the OECD. Based on these guidelines, R&D expenditure is a basic measure that covers "intramural expenditure",[46] in other words, all expenditure for R&D carried out within a statistical unit or sector of the economy in the EU Member States. This implies that expenditure data is based on research carried out within a national territory, regardless of the source of funds.

Therefore, R&D expenditure incurred by taxpayers outside the European Union is incurred outside of the statistical unit and is, therefore, considered "extramural expenditure".[47] It is not taken into account by Eurostat in compiling statistics on R&D expenditure[48] in order to assess progress toward the targeted 3% of the European Union's GDP. This can lead to situations in which Member States will give R&D tax incentives to resident taxpayers in relation to R&D activity that is carried out outside the European Union. The resultant loss of revenue would not be counterbalanced by an increase in R&D expenditure within the European Union.

The wording of article 9 – although it may encourage R&D expenditure that may not be taken into consideration in achieving the targeted 3% of GDP – is probably the consequence of the adoption (in particular regarding output incentives, like patent boxes) by the Commission of the personal nexus-based approach regarding R&D tax incentives, which not only overcomes a natural tendency toward territoriality, i.e. a situation in which taxpayers perform R&D exclusively (or mainly) in the territory of their Member State of residence, but is also compatible with the EU fundamental freedoms.

The second obstacle to uniform implementation of the 2016 CCTB Directive Proposal regarding R&D tax incentives is the fact that the super deduction included in the proposal is not mandatory for all corporations; the proposal is only aimed at corporations with annual turnover of more than EUR 750 million and that are tax resident in a Member State. Smaller companies may opt (or not) to join this scheme. The relaunched CCTB proposal, however, if approved by all EU Member States, would not result in a clean slate from its effective date of application (2019) – at least in the short term – as the super-deduction will coexist alongside the current tax credits provided by EU Member States.

This scenario implies that companies that do not qualify or do not opt for the system provided in the CCTB proposal remain subject to their national corporate tax rules, which may include specific R&D tax incentive schemes that hinder the targeted harmonization.

Finally, two aspects of the design of R&D tax incentives under the 2016 CCTB Directive Proposal deserve particular mention. Firstly, the fact that the Commission's proposal makes the tax incentive a deduction from the tax base cannot be ignored. Direct deductions at the level of tax liability would appear to be more suitable. Super-deductions essentially leave the taxpayer in the same position with regard to tax liability, as the taxpayer will pay the same amount whether income is not included in the tax base at all or included and then excluded by means of a deduction from the tax base. In either instance, the tax incentive applies before applying the tax rate and hence before the amount to be paid is calculated. However, this approach was not decided upon lightly. Configuring the incentive as a deductible expense from the tax base is the only way to harmonize this kind of R&D tax incentive given that the CCTB proposal in no way contemplates R&D tax incentives at the tax liability level.

Second, it must be noted that the deductions under the Commission's proposal privilege only R&D tax expenditure, i.e. are aimed solely at increasing the volume of R&D activity and thus are qualified as "input incentives".[49] This means that the proposal does not provide for "output incentives", i.e. tax measures that fiscally privilege income from R&D activities, usually in the form of intangibles, i.e. "patent box regimes", which currently operate below the level of the tax base (like in Spain or Belgium) or consist in a reduced tax rate (such as in the United Kingdom or the Netherlands). This option, endorsed in the proposal, is in line with a 2014 study published by the European Commission on R&D tax incentives, which does not include patent boxes amongst its best practices.[50]

45. Statistics on science, technology and innovation are based on Decision No 1608/2003/EC of the European Parliament and of the Council concerning the production and development of Community statistics on science and technology, OJ L 230/1 (16 Sept. 2003), available at https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32003D1608&from=EN. The Decision was implemented by the European Commission as Regulation (EC) No 753/2004 on statistics on science and technology (OJ L 118/23 (23 Apr. 2004), available at https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32004R0753&from=EN), which was adopted in 2004. In 2012, a new European Commission Regulation (EU) No 995/2012 concerning the production and development of Community statistics on science and technology was adopted (Commission Implementing Regulation (EU) No 995/2012 of 26 October 2012 laying down detailed rules for the implementation of Decision No 1608/2003/EC of the European Parliament and of the Council concerning the production and development of Community statistics on science and technology (Text with EEA relevance), L 299/18 (27 Oct. 2012), available at https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32012R0995&from=EN), *see* http://ec.europa.eu/eurostat/statistics-explained/index.php/R_%26_D_expenditure#R_.26_D_expenditure_by_sector_of_performance.
46. Intramural expenditures are all expenditures for R&D performed within a statistical unit or sector of the economy during a specific period, whatever the source of funds. Expenditure made outside the statistical unit or sector but in support of intramural R&D (for example, the purchase of supplies for R&D) are included. Both current and capital expenditures are included; *see* OECD, *Frascati Manual* (6th ed., OECD 2015), available at http://www.oecd.org/innovation/inno/frascatimanualproposedstandardpracticeforsurveysonresearchandexperimentaldevelopment6thedition.htm.
47. OECD, *Main definitions and conventions for the measurement of Research and Experimental Development (R&D), A summary of the Frascati Manual 1993* p. 20. French equivalent: *Dépenses extra-muros de R&D.*
48. Although they are a useful supplement to the information collected on intramural expenditures.
49. R&D input incentives include tax credits, enhanced super-deductions and accelerated depreciation.
50. "The empirical evidence suggests that input-related incentives are more likely to be effective than output related incentives. Input-re-

The question that arises is whether this absence of explicit reference, allowing for or prohibiting output tax incentives, would mean – in the event the proposal is approved – that the patent box regimes – present in so many EU Member States – will disappear in 2019 with the entry into force of the CCTB, generating all sorts of legal and practical difficulties for both taxpayers and tax administrations.

If the approval of the proposal does not mean the extinction of patent boxes, the interaction between deductible R&D expenses and input incentives should be closely examined. Several countries offering a patent box, in fact, also provide input tax incentives. Special attention should be paid to, for example, situations in which an R&D super deduction is allocated to privileged IP income. Such an allocation would of course make the R&D tax incentive less attractive, as its tax value would then correspond to the lower corporate tax burden on IP income. In general, however, this approach is not favoured, as R&D tax incentives are, as a rule, allocated to other income.

The principle of proportionality requires some sort of coordination between patent boxes and input incentives. An R&D tax policy, pursuant to which such interaction is simply not addressed, may lead not only to negative tax rates but may also end up extending tax benefits beyond what is necessary.[51]

5. Final Conclusions

In light of the considerations addressed herein, it can be concluded that since the 2016 proposal provides for the same treatment of R&D expenses that many Member States already provide, it is not groundbreaking. The main objective pursued with regard to this aspect of the proposal is harmonization.

A careful reading of article 9 of the 2016 CCTB Directive Proposal reveals that the wording is far from perfect. It, in fact, raises several issues including, inter alia, the lack of a common definition of R&D activity and – closely related to this issue – a common definition of the R&D tax credit base. These issues are of particular concern since they may both lead to uneven implementation of the proposal.

The great diversity of tax instruments that have been developed to foster R&D activity across the European Union is not only the main obstacle to harmonization but also casts doubt on the feasibility of the rushed process of harmonization that is being undertaken. The current legislative process regarding the CCTB has been accelerated, especially taking into consideration the fact that the first concrete attempt to introduce a common consolidated base only dates back to 2011. This short timeframe is not conducive to the thorough reflection that a study of such a tax issue merits, in particular bearing in mind that approval of the relaunched proposal would result in a significant limitation of Member States' autonomy on the crucial matter of R&D tax incentives.

Instead of swift harmonization, it would be desirable for EU Member States to develop a phased-in process that is able to tackle the present reluctance of Member States to adopt the tax credit provided in article 9 of the CCTB on the basis that it would jeopardize a critical aspect of their tax sovereignty.

In the initial stage, Member States have to agree on how to harmonize the R&D tax credit base (which implies deciding, inter alia, whether it should apply only to SMEs or to all firms and whether it should encompass all R&D costs or only aspects of these costs, such as R&D wages). This would be the first step under a coordination approach, which would precede harmonization, with the goal of approximating the tax legislation of the Member States.

Once the tax credit base has been agreed upon, the European Union should take a second step, which would consist in a requirement to provide for an R&D tax credit in all Member States, including a minimum tax credit rate. Once an agreement has been reached on the tax base, it will be easier to gain acceptance of a mandatory R&D tax credit amongst all Member States.[52]

Third – and only once the two previous steps are successfully achieved –, it would be advisable to enter into an extensive harmonization process in this field in order to develop a common definition of "R&D activity" for tax purposes and a detailed definition of the "R&D tax credit base", which would be exactly the same for all Member States.

Maybe the current rush is motivated by a foreseeable "rebirth" of the importance of R&D tax credits as a fundamental tool for reducing the effective corporate tax rate, since Action 5 of the BEPS Project[53] disincentivizes[54] the utilization of the heavily employed output incentives (patent boxes) because they are considered to increase the risk of base erosion and profit shifting by multinational groups in relation to tax jurisdictions with low or no taxation.[55]

lated incentives are also to be preferred from a theoretical perspective for two reasons. First, inventions protected by patents are much less likely to generate externalities, such that the case for fiscal support of income derived from patents is weak. Second, as not all innovation is patented, supporting products protected by IPR can result [in] promoting sectors or types of firms that generate smaller spillovers. This may increase market failure rather than reduce it", *see* European Commission, *A study on R&D Tax Incentives (Final Report)*, Taxation Papers – Working Paper No 52, p. 75 (2014).

51. Danon, *supra* n. 33, at p. 43.

52. Jacquet & Robin, *supra* n. 22, at p. 5.

53. "Countering harmful practices more effectively, taking into account transparency and substance".

54. In Oct. 2015, the OECD published its final report on Action 5 of the BEPS Project regarding harmful preferential tax regimes. This report provides a guideline ("modified nexus approach") for the maximum amount of IP income that may benefit from a preferential tax regime. This nexus approach allows for a preferential tax rate on IP-related income to the extent it is connected to qualifying expenditures in the tax jurisdiction and determines the portion of income from each qualified IP asset that is eligible for tax benefits. *See* OECD/G20, *Countering Harmful Tax Practices More Effectively, Taking into Account Transparency and Substance – Action 5: 2015 Final Report* (OECD 2015), International Organizations' Documentation IBFD.

55. "R&D (&I) schemes and IP regimes may give rise to a risk of base erosion and profit shifting. Base erosion and profit shifting is mainly undertaken by multinational groups in relation to tax jurisdictions with low or non-taxation. That is, for example, jurisdictions granting special tax regimes, such as the patent box, or jurisdictions with a low level of taxation, i.e. tax havens" (Gil García, *supra* n. 38, at p. 584).

Given the existing uncertainty regarding the approval[56] of the 2016 CCTB Directive Proposal – which requires unanimity in the Council – and the time span between approval and actual implementation of the relevant provisions, it would appear to be too early for multinational companies that fall within the scope of the proposed directive to begin revising EU structures to cope with the (eventual) future harmonized provisions.[57]

56. Since the 2016 Proposed CCTB Directive, *supra* n. 6, is related to direct taxation, it falls within the ambit of art. 115 of the Treaty on the Functioning of the European Union of 13 December 2007, OJ C115 (2008), EU Law IBFD, which prescribes that any legislative initiative regarding direct taxation must exclusively be in the form of directives and requires unanimity. It is difficult, however, to predict whether or not a unanimous favourable decision will be reached regarding the 2016 CCTB proposal.

57. S. Grilli, *Proposed Directive on the EU Common (Consolidated) Corporate Tax Base – A primer*, 4 Insights 2, p. 26 (2017).